

REMARKS

Reconsideration of this application, as amended, is requested.

Claims 1-13, 15-17 and 19-21 remain in the application. Claims 14 and 18 are canceled. Claims 1, 3, 7, 11, 12 and 15 have been amended to define the invention more clearly. New independent claims 19 and 21 new dependent claim 20 also have been added.

Original claims 1-17 were rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,845,880 to Granger et al. The Examiner asserted that the Granger et al. patent shows a nozzle with a discharge hole 25 to be hermetically sealed by an inner top portion 40 of a cap. The Examiner further asserted that a ring-shaped projection 21 is formed on an upper portion of the nozzle and a constricted portion 210 is formed below the ring-shaped projection. A plurality of ring-shaped fins 200-201 were identified in the office action as being hermetically brought into contact with an inner surface of a neck.

The Granger et al. reference relates to a spill-proof pouring device for fixing inside the neck of a bottle. More particularly, the Granger et al. reference relates to a pouring device 1 hermetically fixed inside a neck of a bottle. A cap 3 is provided with an insert 4, 8 and a flared portion 21. A flexible protrusion 210 is formed in a peripheral edge 25 of a skirt 2. In a closed state, the protrusion 210 contacts a lip 60 of the bottle. However, in a state before closing or in an open state, the protrusion 210 extends outside from the neck of the bottle.

The Examiner will appreciate that the protrusion 210 of the Granger et al. reference is the upper end of the skirt 2 and contacts a top of the bottle in the closed state.

In contrast to Granger et al., the nozzle defined by amended claim 1 herein has a flange spaced from the top end of the nozzle for contacting the top of the tubular portion of the container. A ring-shaped projection (identified by the numeral 12h in the figures of the subject application) is defined in amended claim 1 as being between and spaced from the flange portion and the top end of the nozzle. Accordingly, the ring-shaped projection does not contact the tubular neck portion, as in Granger et al. Additionally, the ring-shaped projection is formed between the flange 12g that contacts the top surface of the tubular neck portion and the top 12d of the upper portion 12f of the nozzle. The protrusion 210 of the Granger et al. reference is provided for a different purpose than the claimed ring-shaped projection and is not configured to prevent liquid from forming drops and/or dripping. Similar limitations are in the other independent claims. It is submitted that nothing in the Granger et al. reference teaches or suggests the structure defined by the amended claims herein. Accordingly, it is submitted that the invention defined by the amended claims is patentable over Granger et al.

Claims 1-17 also were rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 5,249,712 to Lontrade et al. The Examiner referred to FIGS. 1B and 2 of Lontrade et al. and concluded that the Lontrade et al. reference has a nozzle with a discharging hole 28 to be hermetically sealed by an inner top portion of a cap. The Examiner further concluded that the Lontrade et al. reference has a ring-shaped projection 15 formed on an upper portion of the nozzle, a constricted portion below the ring-shaped projection and ring-shaped fins 9a-d with edges that are brought hermetically into contact with an inner surface of a neck portion of the container.

The Lontrade et al. reference relates to a lock chamber 4 that can be inserted slidably into a neck 2 of a container. A nozzle 18 is provided on a top portion of the lock chamber 4 and includes a delivery duct 21. A cap 26 is provided for sealing the discharge hole 21.

The Examiner compares the annular flange 15 of the lock chamber 4 of Lontrade et al. to the ring-shaped projection of the subject invention which is identified by the numeral 12h in the figures of this application. However, FIG. 1B of Lontrade et al. clearly shows that the annular flange 15 of the lock chamber does not contact the top edge 25 of the neck 2, but rather is spaced a considerable distance therefrom. This space between the annular flange 15 and the top edge 25 of the neck 2 would cause a leak between the annular flange 15 and the neck 2. To avoid any such leak, the annular flange 15 of Lontrade et al. must be urged into tight contact with the top edge 25 of the neck, as shown in FIG. 2. As a result, the analogy of the annular flange 15 of Lontrade et al. to the claimed ring-shaped projection 12h is inappropriate. Rather, any such attempted analogy would require the annular flange 15 of Lontrade et al. to be compared to a flange portion recited in the amended claims (element 12g in the figures of the preferred embodiment). The Lontrade et al. reference does not have both a flange portion and a ring-shaped projection as claimed.

In contrast, the invention defined by amended claim 1, for example, has a nozzle with a discharging hole, a flange portion to be in contact with the top of the tubular neck portion of the liquid container and a ring-shaped projection formed between the flange portion and a top of the nozzle. Similar limitations are in the other independent

claims. The Lontrade et al. reference has no suggestion of the structural features recited in the amended claims or the significant functional advantages achieved by that structure.

Claims 1, 3, 7, 11 and 15-18 were rejected 35 USC 102(b) as being anticipated by Ryder et al., U.S. Patent No. 5,154,325. The Examiner referred to FIG. 2 of the Ryder et al. patent and concluded that the Ryder et al. container has a neck portion 16, a cap 20 coupled with a lid 36 by a hinge. The Examiner further stated that the Ryder et al. reference shows a nozzle with a discharge hole 29 sealed hermetically by an inner top portion of the cap and a ring-shaped projection formed on an upper portion on the nozzle and hermetically brought into contact with the inner surface of the cap.

The Ryder et al. reference discloses a nozzle to be provided on a top of a container for maintaining or dispensing liquid in a sterile condition. The nozzle 28 is held fixedly on a neck 16 by an adaptor 18. The office action compares the annular peripheral bead 25 of Ryder et al. to the claimed ring-shaped projection. However, the annular peripheral bead 25 of Ryder et al. is not exposed from the nozzle 28. Accordingly, the annular peripheral bead 25 of Ryder et al. is not positioned relative to the cap 20 for preventing liquid dripping. Additionally, the annular peripheral bead 25 does not function as a core for drop forming as in the claimed invention. Furthermore, if the annular peripheral bead 25 of Ryder et al. is considered to be the equivalent of the claimed ring-shaped projection, then the nozzle of Ryder et al. has no equivalent of the claimed flange portion of amended claim 1. Similarly, the bead 25 of Ryder et al. is not between the top end of the nozzle and the top of the cap, as amended claim 11. Accordingly, the nozzle of Ryder et al. is structurally and functionally much different than the claimed invention. For

these reasons, the Ryder et al. reference does not teach or suggest the invention defined by the amended claims.

Claims 1-18 were rejected under 35 USC 102(b) as being anticipated by Okawa et al., U.S. Patent No. 5,879,033. The office action referred specifically to FIG. 3A which was considered to show a neck portion, a cap 11 that is coupled with a lid 3 via a hinge. The Okawa et al. reference was further considered to show a nozzle having a discharge hole to be sealed hermetically by an inner top portion of the cap. A ring-shaped projection 25 was considered to be formed on an upper portion of the nozzle for hermetically contacting the inner surface of the cap. Further, a constricted portion was considered to be shown below the ring-shaped projection of Okawa et al. and a plurality of ring-shaped fins were considered to contact an inner surface of the neck.

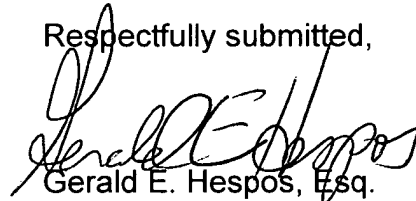
The Okawa et al. reference relates to a container for liquids or powders. More particularly, the Okawa et al. container has a valve 2 provided in the opening of the container and a lid 3 including a pushing structure 4 for covering the valve 2. When the lid 3 is closed, the pushing structure is pushed in to slightly open the slit 23. Thus, in the closed state, the discharge hole is not sealed hermetically. The office action refers to a projection 25 that is not shown in the reference. Perhaps, the office action intended to refer to the stepped peripheral wall of the valve 2. However, the Okawa et al. reference has no ring-shaped projection spaced from and between the top end of the nozzle and the flange portion.

In contrast to Okawa et al., the claimed invention provides a nozzle for a liquid container that can reliably prevent liquid spill and liquid dripping from the nozzle. Additionally, the nozzle of the subject invention can help form liquid drops regardless of the

dripping angle. For these purposes, the nozzle of amended claim 1 has a ring-shaped projection between the flange that contacts the top surface of the tubular neck of the container and the top end of the nozzle. The ring-shaped projection defines the barrier for liquid dripping and a core for forming liquid drops. These features of the invention are set forth clearly in the amended claims and are not taught or suggested by any of the references relied upon in the office action. For these reasons, it is submitted that the invention defined by the amended and new claims herein is patentable over the applied art.

The Examiner is requested to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,



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